PATENT APPLICATION

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re application of	Docket No: Q93023
Misa HANITA, et al.	
Appln. No.: 10/567,360	Group Art Unit: 1782
Confirmation No.: 9859	Examiner: WOOD, ELLEN S
Filed: September 25, 2006	
For: PACKING CONTAINER	

SUBMISSION OF APPEAL BRIEF

MAIL STOP APPEAL BRIEF - PATENTS
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

Submitted herewith please find an Appeal Brief. The statutory fee of $540.00 is being remitted. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: August 26, 2011

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APPEAL BRIEF UNDER 37 C.F.R. § 41.37

MAIL STOP APPEAL BRIEF - PATENTS
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Alexandria, VA 22313-1450

Sir:

In accordance with the provisions of 37 C.F.R. § 41.37, Appellant submits the following:

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I. REAL PARTY IN INTEREST

The real party in interest is TOYO SEIKAN KAISHA, LTD., having a business address of Technology & Packaging Development Division 1-70, Yako 1-chome, Tsurumi-ku, Yokohama-shi Kanagawa, 230-0001 Japan , by virtue of an assignment recorded by the PTO on September 25, 2006, at Reel 018357, Frame 0359.

II. RELATED APPEALS AND INTERFERENCES

Appellants, Appellants' legal representatives, and the Assignee of this application are not aware of any other appeals or interferences that will directly affect, be affected by, or have a bearing on the Board's decision in the pending appeal.

III. STATUS OF CLAIMS

Claims 1 and 3-16 are pending.

Claim 2 is canceled.

Claims 1 and 3-16 are rejected, and are the subject of this appeal.

IV. STATUS OF AMENDMENTS

No amendment was filed subsequent to the Final Office Action dated March 17, 2011.

V. SUMMARY OF THE CLAIMED SUBJECT MATTER

Claim 1 is the only independent claim on appeal.

Claim 1, in reference to Fig. 1, is directed to a packing container having oxygen absorbing layers comprising a base material resin component (component A) and an oxygen absorbing functional component (component B) (page 5, lines 8-11), the oxygen absorbing layers having an islands-in-the-sea structure in which the base material resin component (component A) is forming a sea portion of a continuous phase and the oxygen absorbing functional component (component B) is forming island portions of a dispersed phase (page 5, lines 11-16), wherein the ratio (N/M) of the whole surface area (N cm^2) of the island portions of the oxygen absorbing functional component (component B) in the oxygen absorbing layers to the volume (M cm^3) of the packing container is not smaller than 20 (cm^{-1}) (page 5, lines 16-21), wherein the island portions in the oxygen absorbing layers have an average particle diameter of smaller than 3.5 μm (page 10, lines 15-18).

VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL

Appellants seek review of the following rejection:

Claims 1 and 3-16 stand rejected under 35 U.S.C. §103(a) as being unpatentable over JP 2002-241608 to Kikuchi et al. in view of U.S. Patent Application Publication No. 2003/0130405 to Takagi et al.

VII. ARGUMENT

Appellants respectfully submit that Claims 1 and 3-16 are patentable JP 2002-241608 to Kikuchi et al. in view of U.S. Patent Application Publication No. 2003/0130405 to Takagi et al.

Independent Claim 1 of the present specification recites:

> A packing container having oxygen absorbing layers comprising a base material resin component (component A) and an oxygen absorbing functional component (component B), the oxygen absorbing layers having an islands-in-the-sea structure in which the base material resin component (component A) is forming a sea portion of a continuous phase and the oxygen absorbing functional component (component B) is forming island portions of a dispersed phase, wherein the ratio (N/M) of the whole surface area (N cm^2) of the island portions of the oxygen absorbing functional component (component B) in the oxygen absorbing layers to the volume (M cm^3) of the packing container is not smaller than 20 (cm^{-1}),
>
> wherein the island portions in the oxygen absorbing layers have an average particle diameter of smaller than 3.5 μm.

The Examiner has failed to establish a *prima facie* case of obviousness for the following reasons.

The oxygen absorbing functional component of the present invention is finely dispersed in order to increase the whole surface area and thereby improve the oxygen absorbing property and gas-barrier property from a time when the content is first filled. The effect of attaining the oxygen-absorbing property from the beginning of filling the container is achieved by selecting an

average particle size of the island portions to be not larger than 3.5 μm and by setting a ratio, N/M, of the total surface area N of the island portions and the volume M of the packing container to be not smaller than 20 cm^{-1}.

Appellants respectfully submit that even if the cited references are combined, the presently claimed invention would not be obtained. More particularly, the rejection should be withdrawn because the combination of Kikuchi and Takagi does not teach or suggest a ratio N/M of not smaller than 20 cm^{-1} as required by Claim 1.

First, the effect of attaining the oxygen-absorbing property from the beginning of filling the container is not achieved by the resin composition of Kikuchi that simply has an islands-in-sea structure.

Second. Takagi discloses an islands-in-sea structure, wherein carbon black is present in the amorphous thermoplastic resin that forms island portions, and hollow carbon fibrils are present in the crystalline thermoplastic resin that forms the sea portion, to thereby attain mechanical strength and heat resistance, as well as electric conductivity and antistatic property. Takagi further discloses that the island phase has a long diameter of 0.1 to 10 μm, and the island portion has a weight average particle size of not smaller than 3 μm. Takagi does not at all disclose or suggest forming many small islands in order to increase the total surface area of the island portions so that the ratio N/M exceeds 20.

In this regard, the Examiner considered that the presently claimed ratio of the total surface area of the island portions and the volume of the packing container being not smaller than 20 cm^{-1} is a result effective variable. See, page 3 of the Office Action dated March 17, 2011. However, the Examiner then takes the position, without support in the cited art that "...it

would have been obvious to one of ordinary skill in the art at the time the invention was made to optimize the ratio (N/M) in the oxygen absorbing layers." See page 3 of the Office Action dated March 17, 2011.

The Examiner's position lacks merit.

A particular parameter must first be recognized as a result-effective variable, i.e., a variable which achieves a recognized result, before the determination of the optimum or workable ranges of said variable might be characterized as routine experimentation. See MPEP §2144.05. In this regard, there is nothing in the cited art which recognizes the ratio, N/M, of the total surface area N of the island portions and the volume M of the packing container, as a result effective variable.

More particularly, Kikuchi and Takagi make no reference to forming many small islands with a particular ratio, N/M, at all, let alone disclose or suggest the conditions that a skilled artisan would need to optimize such a ratio so as to achieve the invention of Claim 1. Thus, contrary to the Examiner's position, it would not have been obvious to optimize the ratio (N/M) in the oxygen absorbing layers, given the disclosures of Kikuchi and Takagi.

In addition, Appellants direct the Examiner's attention to the results of Comparative Example 2 of the present specification. In Comparative Example 2, an islands-in-sea structure is formed, wherein the island portions have an average particle size of 4.30 μm and the ratio N/M is 7.4, which are outside the presently claimed respective ranges. As a result, the container of Comparative Example 2 has a concentration of oxygen dissolved in water which is inferior to those of the containers that have ratios N/M of not smaller than 20 (i.e., Examples 1 to 10).

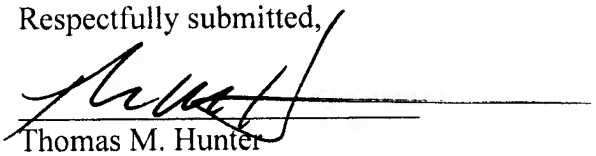
Thus, even if one skilled in the art did combine Kikuchi with Takagi, the present invention, as defined by Claim 1, would not be obtained.

In view of the foregoing, Appellants respectfully request the Board to reverse the rejection of Claims 1 and 3-16 over Kikuchi and Takagi.

VIII. CONCLUSION

The statutory fee (37 C.F.R. §41.37(a) and 1.17(c)) is being remitted. The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,



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CLAIMS APPENDIX

CLAIMS 1 AND 3-16 ON APPEAL:

1. A packing container having oxygen absorbing layers comprising a base material resin component (component A) and an oxygen absorbing functional component (component B), the oxygen absorbing layers having an islands-in-the-sea structure in which the base material resin component (component A) is forming a sea portion of a continuous phase and the oxygen absorbing functional component (component B) is forming island portions of a dispersed phase, wherein the ratio (N/M) of the whole surface area (N cm^2) of the island portions of the oxygen absorbing functional component (component B) in the oxygen absorbing layers to the volume (M cm^3) of the packing container is not smaller than 20 (cm^{-1}),

wherein the island portions in the oxygen absorbing layers have an average particle diameter of smaller than 3.5 μm.

3. A packing container according to claim 1, wherein the base material resin component (component A) is a thermoplastic polyester resin.

4. A packing container according to claim 3, wherein the thermoplastic polyester resin is a polyethylene terephthalate.

5. A packing container according to claim 1, wherein the oxygen absorbing functional component (component B) comprises a gas barrier resin, an oxidizing organic component and a transition metal catalyst.

6. A packing container according to claim 5, wherein the gas barrier resin is a polyamide resin obtained by the polycondensation reaction of a diamine component containing chiefly a xylylenediamine having a terminal amino group concentration of not smaller than 40 eq/10^6 g with a dicarboxylic acid component.

7. A packing container according to claim 5, wherein the oxidizing organic component comprises a polymer derived from a polyene.

8. A packing container according to claim 7, wherein the polymer derived from a polyene is an acid-modified polyene polymer.

9. A packing container according to claim 5, wherein the oxygen absorbing functional component (component B) contains the oxidizing organic component in an amount of 0.01 to 10% by weight.

10. A packing container according to claim 5, wherein the oxygen absorbing functional component (component B) contains the transition metal catalyst in an amount of 100 to 3000 ppm calculated as transition metal atoms.

11. A packing container according to claim 5, wherein the transition metal catalyst is a cobalt salt of carboxylic acid.

12. A packing container according to claim 5, wherein the oxidizing organic component is not existing in the sea portion.

13. A packing container according to claim 1, wherein the oxygen absorbing functional component (component B) comprises an oxidizing organic component and a transition metal catalyst.

14. A packing container according to claim 13 wherein the oxidizing organic component is a polyamide resin obtained by the polycondensation reaction of a diamine component containing chiefly a xylylenediamine having a terminal amino group concentration of smaller than 40 eq/10^6 g with a dicarboxylic acid component.

15. A packing container according to claim 1, wherein the packing container is the one having a multi-layer structure laminating another layer on the oxygen absorbing layers.

16. A packing container according to claim 15, wherein the oxygen absorbing layers contain the oxygen absorbing functional component (component B) in an amount of 10 to 60% by weight.

EVIDENCE APPENDIX

None.

RELATED PROCEEDINGS APPENDIX

Appellants, Appellants' legal representatives, and the Assignee of this application are not aware of any other appeals or interferences that will directly affect, be affected by, or have a bearing on the Board's decision in the pending appeal.